

CLAIMS

1. A powder paint, characterized in that pigment particles therein are bound via shellac to base paint powders therein.
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2. The powder paint according to Claim 1, wherein the content of the shellac is 0.01 to 1 mass % with respect to the total amount of the powder paint.
- 10 3. The powder paint according to Claim 1 or 2, wherein the average diameter of the base paint powders is 10 to 100 μm .
4. The powder paint according to any one of Claims 1 to 3, wherein the average diameter of the pigment particles is not more than 100
15 μm .
5. The powder paint according to any one of Claims 1 to 4, wherein the powder paint contains a bright pigment as the pigment particle and the average diameter of the bright pigment is 2 to 100 μm .
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6. The powder paint according to Claim 5, wherein the bright pigments are in the shape of flake and the thickness thereof is 0.01 to 10 μm .
- 25 7. The powder paint according to any one of Claims 1 to 6, wherein the powder paint contains an inorganic coloring pigment as the pigment particle and the average diameter of the inorganic coloring pigments is 0.01 to 5.0 μm .
- 30 8. The powder paint according to any one of Claims 1 to 7, wherein the powder paint contains an organic coloring pigment as the pigment particle and the average diameter of the organic coloring pigments is 0.01 to 1.0 μm .
- 35 9. The powder paint according to any one of Claims 1 to 8, wherein the powder paint contains a phosphorescent pigment as the pigment particle and the average diameter of the phosphorescent pigment is

1 to 100 μm .

10. The powder paint according to any one of Claims 1 to 9, wherein
the content of the pigment particle is 0.1 to 50 mass % with respect
5 to the total amount of the powder paint.

11. A process of producing the powder paint according to any one
of Claims 1 to 10, characterized in that the process comprises the
steps of: blending the base paint powder and the pigment particle;
10 blending the resulting mixture with a liquid bonding auxiliary agent
wherein shellac is dissolved in an organic solvent; and drying.

12. The process of producing the powder paint according to Claim
11, wherein the liquid bonding auxiliary agent is blended using a
15 mechanically agitating blender in the blending step.

13. The process of producing the powder paint according to Claim
11, wherein the liquid bonding auxiliary agent is blended using an
airstream fluidized blender in the blending step.

20 14. The process of producing the powder paint according to any one
of Claims 11 to 13, wherein the liquid bonding auxiliary agent is
added by spraying or dropwise addition.

25 15. The process of producing the powder paint according to Claim
14, the step of spraying the liquid bonding auxiliary agent is carried
out concurrently with the step of drying by supplying air.

30 16. The process of producing the powder paint according to Claim
15, wherein heated air is used as the air.

35 17. A process of forming a coated film, characterized in that the
coated film is formed by electrostatic powder coating of the powder
paint according to any one of Claims 1 to 10 onto a substrate made
of metal material.

18. The process of forming a coated film according to Claim 17,

wherein a primer layer is formed in advance to the electrostatic powder coating.

19. The process of forming a coated film according to Claim 18,
5 wherein the primer layer is formed with a powder paint.

20. The process of forming a coated film according to Claim 19,
wherein the primer layer is formed with a powder paint having an epoxy
resin hardening-type polyester resin or acid hardening-type epoxy
10 group-containing acrylic resin as the main component of the base paint
powder.

21. The process of forming a coated film according to any one of
Claims 17 to 20, wherein an additional top clear layer is formed over
15 the coated film.

22. The process of forming a coated film according to Claim 21,
wherein the top clear layer is formed with an acrylic solvent-based
clear paint or acrylic powder-based clear paint.

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23. The process of forming a coated film according to Claim 22,
wherein a polyisocyanate hardening-type clear paint is used as the
acrylic solvent-based clear paint.

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24. The process of forming a coated film according to Claim 22,
wherein an acid hardening-type clear paint having epoxy groups is
used as the acrylic powder-based clear paint.

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25. The process of forming a coated film according to Claim 22,
wherein a clear paint, having an epoxy group-containing acrylic resin
as the base resin and containing a polycarboxylic acid as a curing
agent, is used as the acrylic powder-based clear paint.

26. The process of forming a coated film according to Claim 25,
35 wherein dodecanedicarboxylic acid is used as the polycarboxylic acid.

27. A process of producing a coated product coated with a powder

paint, characterized in comprising a step of coating the powder paint according to any one of Claims 1 to 10 onto a substrate made of metal material by electrostatic powder coating.

5 28. The process of producing a coated product according to Claim 27, further comprising a step of forming a primer layer onto the substrate in advance to the electrostatic powder coating step.

10 29. The process of producing a coated product according to Claim 28, wherein the primer layer is formed with a powder paint.

15 30. The process of producing a coated product according to Claim 28, wherein the primer layer is formed with a powder paint having an epoxy resin hardening-type polyester resin or acid hardening-type epoxy group-containing acrylic resin as the main component of the base paint powder.

20 31. The process of producing a coated product according to any one of Claims 27 to 30, further comprising a step of forming a top clear layer as the utmost outer layer.

32. The process of producing a coated product according to Claim 31, wherein the top clear layer is formed with an acrylic solvent-based clear paint or acrylic powder-based clear paint.

25 33. The process of producing a coated product according to Claim 32, wherein a polyisocyanate hardening-type clear paint is used as the acrylic solvent-based clear paint.

30 34. The process of producing a coated product according to Claim 32, wherein an acid hardening-type having epoxy groups is used as the acrylic powder-based clear paint.

35 35. The process of producing a coated product according to Claim 32, wherein a clear paint, having an epoxy group-containing acrylic resin as the base resin and containing a polycarboxylic acid as a curing agent, is used as the acrylic powder-based clear paint.

36. The process of producing a coated product according to Claim 35, wherein dodecanedicarboxylic acid is used as the polycarboxylic acid.

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37. A coated product, characterized in being produced by the process according to any one of Claims 27 to 36.